

**What is the impact of the University of Delaware Turbine on the BPW?** The operation of the University of Delaware wind turbine has a negligible effect on BPW customer electric utility rates.

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**ISSUE: University of Delaware (UD) turbine.** The BPW has a Memorandum of Understanding (MOU) with UD regarding its payment for net metering of services and commodity usage as it applies to the power generated from the wind turbine located on the UD's Hugh R. Sharp Campus, Lewes, Delaware.

**BACKGROUND:** The University of Delaware and Gamesa Technology Corporation joined forces to install a utility-scale 2-megawatt (2-MW) wind turbine at UD's Hugh R. Sharp Campus in Lewes. The joint venture, First State Marine Wind, is a partnership between UD-owned Blue Hen Wind and Gamesa USA became operational in June 2010. This partnership came about because of synergies that emerged from wind research being conducted at UD's College of Earth, Ocean, and Environment and College of Engineering, the State of Delaware's interest in offshore wind, the City of Lewes' interest in innovative energy opportunities, and Gamesa's interest in improving its understanding of the effects of marine conditions such as salt spray on turbine coatings, corrosion, and avian impacts. In 2008, UD worked with Ontario, N.Y.-based Sustainable Energy Developments Inc. to determine the feasibility of placing a commercial scale turbine on the campus. The results of that study indicated that the energy generated from a 2-MW turbine would offset the energy used at the Lewes campus. In addition, the turbine provides educational opportunities for undergraduate and graduate science and engineering students interested in wind energy. (Source: <http://www.ceoe.udel.edu/lewesturbine/welcome.shtml>)

In some months, the power generated by the turbine exceeds the university's requirements. During these months UD "sells back" electricity to the BPW at the wholesale rate the BPW pays (per kWh) from its contract provider of electricity. In the months when the winds are not sufficient for the turbine to generate sufficient electricity to meet UD's needs, it purchases power at the industrial rate from the BPW. The strength of the winds in the vicinity of the turbine is typically at its lowest during the warmest summer months and in mid-winter. These also happen to be the months when electricity is needed most for cooling and heating the campus buildings. As a result the BPW must maintain its systems and infrastructure to meet the university demand for sufficient power to meet the cooling and heating needs of the UD campus all year long. Despite its significant power generation capabilities, UD continues to pay the standard industrial rate tariff "ready to serve" and "demand" charges maintaining the BPW infrastructure that supports the UD campus need for power.

**STATUS:** The Board of Public Works has a memorandum of understanding (MOU) with the University of Delaware establishing a "virtual" net metering of energy from the wind turbine, as well as the "ready to serve" and "demand charges" that are equivalent to all "industrial" rate customers. **The MOU protects all other BPW customers from paying more for their electricity because of the university turbine.**

**QUESTIONS:** If you have further questions about the BPW cooperation with the University of Delaware on its turbine project, please contact the BPW General Manager, Darrin Gordon: 302-645-6228 or go to: [www.ci.lewes.de.us/BPW-Utilities](http://www.ci.lewes.de.us/BPW-Utilities)

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